

DEVELOPMENT OF HANDOUTS MATERIALS OF WORKING USING LATHE MACHINE AT PIRI I VOCATIONAL HIGH SCHOOL YOGYAKARTA

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ABSTRACT

The purpose of this research is to develop a new product in the form of handout about working with lathe machine for PIRI 1 vocational high school in Yogyakarta.

Research method is research and development (R&D). Developing new products in the form of handouts for mechanical work subjects through some stages, namely (1) preliminary study; (2) planning; (3) early product development; (4) revising design (5) initial field trials (6) revision I; (7) the main field trials; (8) the second revision; (9) operational field trials; (10) revision of the final product; and (11) product improvement. Research was conducted at two grade students majoring in vocational high school machining techniques PIRI 1 Yogyakarta. Data collection was using a questionnaire instrument. Analytical techniques were qualitative and quantitative analysis to determine the feasibility of the handouts of learning to do the job with a lathe.

Result of this study is a medium of learning that produced a handout shaped products to work with a lathe. Based of the syllabus, competency standards and basic competencies of materials were then developed into three handouts. Subject matter of each handout, namely (1) the first handout: explained the lathe and all kinds and parts of lathe; (2) the second handout: explained the speeds of cutting tools and lathes (3) the third handout: replacement gears and explain the process on turning, test the feasibility of the handouts of learning to work with a lathe that was developed, by rating Lecturer matter experts to obtain an overall average score of 3,46 with the assessment criteria for both, Teacher courses machining techniques as matter experts to obtain an average score of 4,4 overall with very good criterion, of media experts to obtain an average overall score of 4,05 with the assessment criteria for both, and from field tests obtain an average overall score of 4,12 with the assessment criteria for both. The feasibility standards of handouts can be obtained if the total average was more than the minimum standards of good. Based on these data, we can conclude that the handout was good enough to be developed to support the learning of working with lathe machine.

Kata kunci : *handout*, learning to work with a lathe